

Series 806 Mil-Aero Connectors

806-043 Lightweight Hermetic PCB Receptacle with El Ochito Contacts

CODE RED



Features

- Triple-start stub ACME mating thread
- High density #22HD / El Ochito arrangements for reduced size and weight
- Aerospace-grade materials, construction
- Integral PC board standoffs
- Threaded holes for secure attachment to rigid or flex circuits
- Alignment post

Specifications

- Operating temperature: -65°C to +200°C
- Dielectric withstanding voltage #22HD layouts: 1300 VAC
- Mating durability: 500 cycles (El Ochito)
- Mechanical shock: EIA-364-27, 300g.
- Vibration (sine): MIL-DTL-38999M, 60g.
- Vibration (random) EIA-364-28 Condition VI, Letter J, 43.92 Grms, +200°C
- High Impact shock: MIL-S-901 Grade A
- Humidity: EIA-364-31 Method 4
- Salt spray (dynamic): EIA-364-26, 500 hours (96 hours for nickel-plated versions)
- Fluid immersion: EIA-364-10
- Altitude immersion: EIA-364-03 75,000 feet altitude
- Indirect Lightning Strike: EIA-364-75 Type B Level 2 10kA Peak

Connector Construction

- Shell, jam-nut: aluminum or stainless steel
- Contacts: copper alloy, gold plating
- Potting compound: epoxy
- Interfacial seal and peripheral seal: fluorosilicone
- Dielectric inserts: high grade rigid dielectric
- Panel O-ring: fluorosilicone

Lightweight aluminum hermetic. Higher current rating. 806-043 aluminum hermetic receptacles with high-speed El Ochito contacts are lighter than stainless steel glass-to-metal hermetic connectors. A signature sealing process delivers reliable hermetic performance. Copper alloy contacts have lower resistance and higher current rating than iron alloy contacts used in conventional hermetics. Hermeticity is $1E^{-7}$ cm³/sec at 1 ATM pressure differential. Integral standoffs and threaded mounting holes provide secure attachment to rigid or flex circuits. Series 806 connectors are parylene compatible, and ideal for high-speed aerospace data link applications.

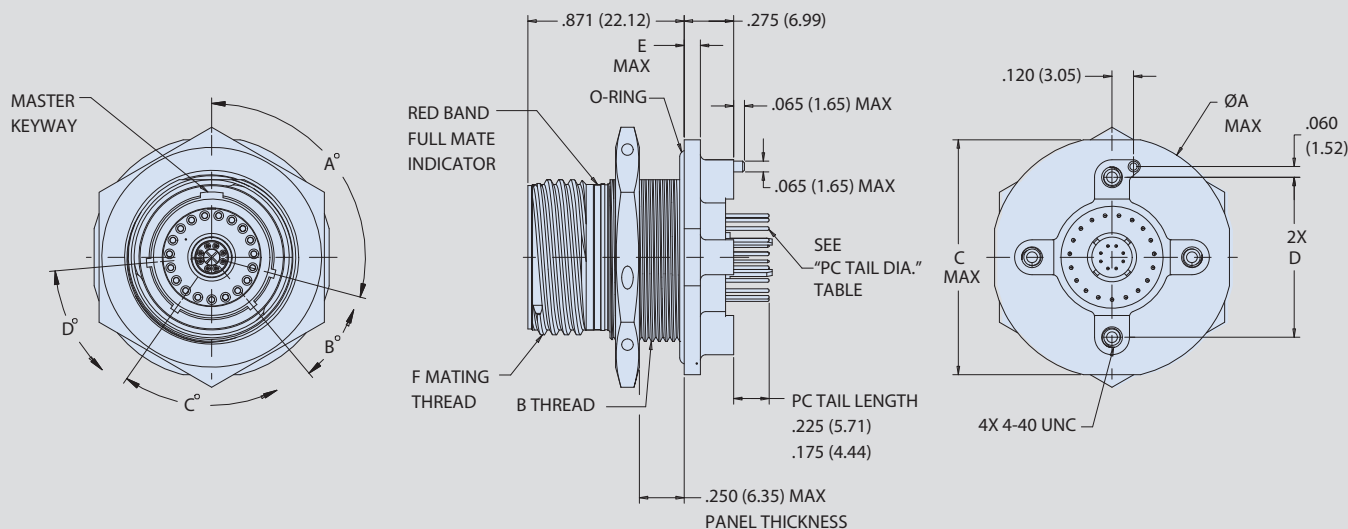
How To Order	
SAMPLE PART NUMBER	806-043 -ME 14 E - 20A S A
Product	806-043 = Jam-Nut, El Ochito PCB Recept
Shell Material and Finish	ME = Aluminum, Electroless Nickel MT = Aluminum, Ni/PTFE ZR = Aluminum, Black Zinc-Nickel NF = Aluminum, Olive Drab Cadmium Z1 = Stainless Steel, Passivated
Shell Size	See Table I or Dimensions Table
Protocol Code	See Table II
Ground Option	G = Common Ground for arrangements 10-1, 16-2, 18-3, 20-4, 22-5, and 24-8 only Dash (-) = None
Contact Layout	See Table I
Contact Gender	P = Pin S = Socket
Polarization	A B C D E F

Table I: Shell Size - Insert Arrangement		
Contact Layout	Number of Contacts	
	22HD	8
10-1		1
16-2		2
18-3		3
20-4		4
22-5		5
24-8		8
14-20A	19	1
16-22	20	2
18-21	18	3
20-28	24	4
22-44	40	4
24-97	93	4

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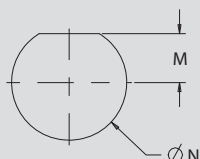


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Dimensions

Shell Size	ØA Max	B Thread	C Max	D	E Max	F Mating Thread
10	1.110	M18 X 1-6g-.100R	1.050 (26.67)	0.679 (17.25)	0.100 (2.54)	.6250-.067P-.2L-TS-2A
14	1.360	M24 X 1-6g-.100R	1.320 (33.53)	0.891 (22.63)	0.100 (2.54)	.8750-.067P-.2L-TS-2A
16	1.515	M27 X 1-6g-.100R	1.444 (36.68)	1.049 (26.64)	0.100 (2.54)	1.000-.067P-.2L-TS-2A
18	1.610	M30 X 1-6g-.100R	1.570 (39.88)	1.148 (29.16)	0.100 (2.54)	1.1250-.067P-.2L-TS-2A
20	1.850	M34 X 1-6g-.100R	1.760 (44.70)	1.252 (31.80)	0.128 (3.25)	1.250-.067P-.2L-TS-2A
22	2.010	M37 X 1-6g-.100R	1.913 (48.59)	1.369 (34.77)	0.128 (3.25)	1.3750-.067P-.2L-TS-2A
24	2.195	M41 X 1-6g-.100R	2.070 (52.58)	1.509 (38.33)	0.128 (3.25)	1.5000-.067P-.2L-TS-2A



RECOMMENDED MOUNTING HOLE DIMENSIONS

Recommended Mounting Hole

Shell Size	M	N
	+ .005 (0.13) 0.000 (0.00)	+ .005 (0.13) 0.00 (0.00)
10	0.318 (8.08)	0.719 (18.26)
14	0.443 (11.25)	0.955 (24.26)
16	0.505 (12.83)	1.073 (27.25)
18	0.568 (14.43)	1.192 (30.28)
20	0.630 (16.00)	1.349 (34.26)
22	0.693 (17.60)	1.467 (37.26)
24	0.755 (19.18)	1.624 (41.25)

PC Tail Diameter



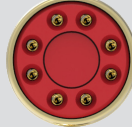
CONTACT SIZE	PC Tail
22	Ø .020
El Ochito Signal	Ø .016
El Ochito Ground	.030 Sq.

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El Ochito Mating Contact		
PART NUMBER	PROTOCOLS	
WHITE - PIN	858-045 Type I	10GBASE-T ETHERNET, CAT 6A 40GBASE-T ETHERNET, CAT 8
	858-051 Type II	10GBASE-T ETHERNET, CAT 6A 40GBASE-T ETHERNET, CAT 8
WHITE - SKT	858-046 Type I	10GBASE-T ETHERNET, CAT 6A 40GBASE-T ETHERNET, CAT 8
	858-052 Type II	10GBASE-T ETHERNET, CAT 6A 40GBASE-T ETHERNET, CAT 8
BLUE - PIN	858-047	USB 3.0, OTHER 90 OHM SIGNALS
BLUE - SKT	858-048	USB 3.0, OTHER 90 OHM SIGNALS
RED - PIN	858-049	HDMI, DISPLAYPORT, SATA, OTHER 100 OHM SIGNALS
RED - SKT	858-050	HDMI, DISPLAYPORT, SATA, OTHER 100 OHM SIGNALS

El Ochito Protocols		
		
WHITE	BLUE	RED
10GBASE-T	USB 3.0	HDMI, SATA, DisplayPort

The Ochito octaxial contact has a color-coded insulator signifying the data protocol. White is used for 10 Gb Ethernet, blue is used for USB 3.0, and red is used for multi gigabit 100 ohm protocols including HDMI, DisplayPort and SATA. The connector part number includes a protocol code from Table III. This code determines specific contact position for every combination of protocol.



Example
Code E7



Example
Code E5

Table III: Protocol Code for El Ochito Contact Positions B = Blue, R = Red, W = White								
SYMBOL	Contact							
	A	B	C	D	E	F	G	H
E	W	W	W	W	W	W	W	W
E2	B	W	W	W	W	W	W	W
E3	R	W	W	W	W	W	W	W
E4	B	B	W	W	W	W	W	W
E5	R	B	W	W	W	W	W	W
E6	R	R	W	W	W	W	W	W
E7	B	B	B	W	W	W	W	W
E8	R	B	B	W	W	W	W	W
E9	R	R	B	W	W	W	W	W
E10	R	R	R	W	W	W	W	W
E11	B	B	B	B	W	W	W	W
E12	R	B	B	B	W	W	W	W
E13	R	R	B	B	W	W	W	W
E14	R	R	R	B	W	W	W	W
E15	R	R	R	R	W	W	W	W
E16	B	B	B	B	B	W	W	W
E17	R	B	B	B	B	W	W	W
E18	R	R	B	B	B	W	W	W
E19	R	R	R	B	B	W	W	W
E20	R	R	R	R	B	W	W	W
E21	R	R	R	R	R	W	W	W
E22	B	B	B	B	B	B	W	W
E23	R	B	B	B	B	B	W	W
E24	R	R	B	B	B	B	W	W
E25	R	R	R	B	B	B	W	W
E26	R	R	R	R	B	B	W	W
E27	R	R	R	R	R	B	W	W
E28	R	R	R	R	R	R	W	W
E29	B	B	B	B	B	B	B	W
E30	R	B	B	B	B	B	B	W
E31	R	R	B	B	B	B	B	W
E32	R	R	R	B	B	B	B	W
E33	R	R	R	R	B	B	B	W
E34	R	R	R	R	R	B	B	W
E35	R	R	R	R	R	R	B	W
E36	R	R	R	R	R	R	R	W
E37	B	B	B	B	B	B	B	B
E38	R	B	B	B	B	B	B	B
E39	R	R	B	B	B	B	B	B
E40	R	R	R	B	B	B	B	B
E41	R	R	R	R	B	B	B	B
E42	R	R	R	R	R	B	B	B
E43	R	R	R	R	R	R	B	B
E44	R	R	R	R	R	R	R	B
E45	R	R	R	R	R	R	R	R